Appl. No. 09/934,775 Amdt. dated February 5, 2004 Reply to Office Action of Nov. 6, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claim 2 as follows:

Listing of Claims:

(Previously Presented) A switched current steering device comprising:

 an actual switch coupled to an actual output node and operable to receive an input signal sequence that indicates a set of state transitions associated with the actual switch; and

a dummy switch coupled to a dummy node and operable to receive a dummy signal sequence that indicates a set of state transitions associated with the dummy switch, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence.

2. (Currently Amended) The switched current steering device of claim 1, further comprising A switched current steering device comprising:

an actual switch coupled to an actual output node and operable to receive an input signal sequence that indicates a set of state transitions associated with the actual switch;

a dummy switch coupled to a dummy node and operable to receive a dummy signal sequence that indicates a set of state transitions associated with the dummy switch, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; and an activation unit having an input coupled to receive the input signal

an activation unit having an input coupled to receive the input signal sequence and an output coupled to provide the dummy signal sequence to the dummy switch.

(Previously Presented) A switched current steering device comprising:

 an actual switch coupled to receive an input signal sequence that indicates a

 set of state transitions associated with the actual switch;

a dummy switch coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the dummy switch, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; and

an activation unit coupled to receive a next state of the actual switch, a present state of the actual switch, and a present state of the dummy switch, and coupled to provide the dummy signal to the dummy switch.

4. (Previously Presented) A switched current steering device comprising:
an actual switch coupled to receive an input signal sequence that indicates a
set of state transitions associated with the actual switch;

a dummy switch coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the dummy switch, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence;

a first current source coupled to the actual switch;
a second current source coupled to the dummy switch; and
wherein the second current source provides a different amount of current
than the first current source.

5. (Previously Presented) A switched current steering device comprising: an actual switch coupled to receive an input signal sequence that indicates a set of state transitions associated with the actual switch;

a dummy switch coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the dummy switch, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence;

a first current source coupled to the actual switch; a second current source coupled to the dummy switch; and

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wherein the second current source provides less current than the first current source.

6. (Previously Presented) A switched current steering device comprising: an actual switch coupled to receive an input signal sequence that indicates a set of state transitions associated with the actual switch;

a dummy switch coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the dummy switch, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; and

wherein the actual switch and the dummy switch form a portion of a digital to analog converter.

7. (Previously Presented) A switched current steering device comprising: a plurality of actual switches respectively coupled to a plurality of actual output nodes, each actual switch operable to receive an input signal sequence that indicates a set of state transitions associated with the plurality of actual switches; and a plurality of dummy switches respectively coupled to a plurality of dummy

a plurality of dummy switches respectively coupled to a plurality of dummy nodes and operable to receive a dummy signal sequence that indicates a set of state transitions associated with the plurality of dummy switches, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence.

- 8. (Previously Presented) The switched current steering device of claim 7, wherein the number of dummy switches equals the number of actual switches.
- 9. (Previously Presented) The switched current steering device of claim 7, further comprising a switch activation unit coupled to receive the input signal sequence and coupled to provide the dummy signal sequence to the plurality of dummy switches.

10. (Previously Presented) A switched current steering device comprising:
a plurality of actual switches coupled to receive an input signal sequence that
indicates a set of state transitions associated with the plurality of actual switches;

a plurality of dummy switches coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the plurality of dummy switches, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; and

a switch activation unit coupled to receive a set of next states corresponding to the plurality of actual switches, a set of present states corresponding to the plurality of actual switches, and a set of present states corresponding to the plurality of dummy switches, and further coupled to provide the dummy signal sequence to the plurality of dummy switches.

11. (Previously Presented) A switched current steering device comprising:
a plurality of actual switches coupled to receive an input signal sequence that indicates a set of state transitions associated with the plurality of actual switches;

a plurality of dummy switches coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the plurality of dummy switches, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; and

an activation unit corresponding to each dummy switch, each activation unit coupled to receive a signal within the input signal sequence and coupled to provide a signal within the dummy signal sequence to its corresponding dummy switch.

12. (Previously Presented) A switched current steering device comprising:
a plurality of actual switches coupled to receive an input signal sequence that indicates a set of state transitions associated with the plurality of actual switches;

a plurality of dummy switches coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the plurality of dummy switches,

the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; and

an activation unit corresponding to each dummy switch, each activation unit coupled to receive a next state of an actual switch, a present state of an actual switch, and a present state of its corresponding dummy switch, and further coupled to provide a signal within the dummy signal sequence to its corresponding dummy switch.

13. (Previously Presented) A switched current steering device comprising:
a plurality of actual switches coupled to receive an input signal sequence that indicates a set of state transitions associated with the plurality of actual switches;

a plurality of dummy switches coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the plurality of dummy switches, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; a first current source coupled to an actual switch within the plurality of actual switches;

a second current source coupled to a dummy switch within the plurality of dummy switches; and

wherein the second current source provides a different amount of current than the first current source.

14. (Previously Presented) A switched current steering device comprising:
a plurality of actual switches coupled to receive an input signal sequence that indicates a set of state transitions associated with the plurality of actual switches;

a plurality of dummy switches coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the plurality of dummy switches, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; a first current source coupled to an actual switch within the plurality of actual switches;

a second current source coupled to a dummy switch within the plurality of dummy switches; and

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wherein the second current source provides less current than the first current source.

15. (Previously Presented) A switched current steering device comprising: a plurality of actual switches coupled to receive an input signal sequence that indicates a set of state transitions associated with the plurality of actual switches;

a plurality of dummy switches coupled to receive a dummy signal sequence that indicates a set of state transitions associated with the plurality of dummy switches, the dummy signal sequence indicating state transitions that are mutually exclusive of state transitions indicated by the input signal sequence; and

wherein the plurality of actual switches and the plurality of dummy switches form a portion of a Digital to Analog converter.

16. (Previously Presented) In a switched current steering device that includes a plurality of actual switches and a plurality of dummy switches, a method for reducing noise comprising the steps of:

transitioning the actual switches in response to an input signal sequence; and

transitioning the dummy switches in response to a dummy signal sequence such that the number of actual switch state transitions plus the number of dummy switch state transitions is constant independent of the input signal sequence during device operation.

17. (Previously Presented) In a switched current steering device that includes a plurality of actual switches and a plurality of dummy switches, a method for reducing noise comprising the steps of:

maintaining a number of actual switch state transitions plus a number of dummy switch state transitions constant during device operation; providing the actual switches with a first operating current; and

providing the dummy switches with a second operating current that is different from the first operating current.

18. (Previously Presented) In a switched current steering device that includes a plurality of actual switches and a plurality of dummy switches, a method for reducing noise comprising the steps of:

maintaining a number of actual switch state transitions plus a number of dummy switch state transitions constant during device operation; providing the actual switches with a first operating current; and

providing the dummy switches with a second operating current that is less than the first operating current.

- 19. (Previously Presented) The method of claim 16, wherein a total switching power corresponding to the number of actual switches plus the number of dummy switches remains essentially constant during device operation.
- 20. (Previously Presented) In a switched current steering device that includes a set of actual switches and a set of dummy switches corresponding to the set of actual switches, a method for reducing noise comprising the steps of:

determining whether an actual switch will change state during a next switching cycle; and

changing a state of a dummy switch during the next switching cycle in the event that the state of the actual switch will remain unchanged during the next switching cycle.

21. (Previously Presented) The method of claim 20, further comprising the step of maintaining a total switching power corresponding to a number of actual switches plus a number of dummy switches at an essentially constant level during device operation.